

EU-SAFETY DATA SHEET

Amendment date: 23.11.2004

Date of Printing: 25.04.2008

EU-SDB30061A

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SHERAPRESS

Cold polymerisate

1. Substance / preparation and company name

Product name:

SHERAPRESS

Supplier:

SHERA Werkstoff-Technologie

GmbH & Co. KG

Espohlstr. 53

49448 Lemförde

Germany

Tel.: +49 54 43 - 99 33 - 0

Fax: +49 54 43 - 99 33 - 100

2. Composition / Details of components

Chemical properties

Methylmethacrylate-based acrylic polymers.

Hazardous ingredients

Designation Dibenzoyl peroxide

Concentration < 1 %

CAS Number 94-36-0

Danger symbols E, Xi

Risk phrases (R-phrases) 2, 7, 36, 43

3. Possible dangers

Description of the hazards

May cause sensitization by skin contact.

4. First aid

After inhalation

In case of inhalation remove casualty to fresh air and allow to rest. If irritation persists seek medical advice.

After contact with skin

In case of contact with skin wash off immediately with soap and water. If skin irritation occurs seek medical advice.

After contact with eyes

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

After ingestion

If irritations occur seek medical advice.

5. Fire fighting

Suitable extinguishing media

Water spray jet, foam, dry powder, carbon dioxide.

Unsuitable extinguishing media due to safety reasons

Full water jet.

Special protective equipment

Wear self-contained respiratory protective device.

Information for Fire department / Fire-fighters

Just started fires can still be extinguished with water. As soon as the acrylic started to melt and the viscous mass is on fire this material may behave like burning oil or grease when in contact with water. It is recommended to extinguish the fire with an extinguishing gel such as Hydrex gel.

6. Action in the event of accidental release

Environmental protection measures and cleaning

Pick up spills using suitable equipment and dispose of in accordance with the regulations.

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7. Handling and storage

Handling

Instructions on safe handling

Avoid dust formation.

Information on fire and explosion protection

Take precautionary measures against static discharges. In the event of fire, cool the endangered product with water.

Storage

Requirements for storage areas and containers

Store dry. Keep out of direct sunlight.

8. Exposure limits and personal safety equipment

Constituents with occupational exposure limits that require monitoring

CAS No.	designation	type	value/unit	Peak limit category
94-36-0	Dibenzoyl peroxide	OEL	5 mg/m ³	I
80-62-6	Methyl methacrylate	OEL	210 mg/m ³	I

Remarks

Sensitizing; Y: Danger of damage to unborn children is not to be feared as long as the TLV value does not extend above mentioned amount.

General protective measures

Do not inhale dusts.

Hygiene measures

Follow the regular standards of occupational hygiene.

Respiratory protection

Filtering half mask in case of dust formation.

Eye protection

Wear protective goggles.

Body protection

Not necessary

Hand protection

Wear protective gloves made of butyl rubber, break through time 300 min (EN 374). The selection of gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to application.

General information

Gloves should be changed regularly, especially after over excessive contact with the product. A different type of glove should be considered for each workspace.

9. Physical and chemical properties

Appearance

Form: powdery

Colour: white, pink

Odour: odourless

Safety details

Softening temperature approx. 102 °C

Meltingpoint not applicable

Flashpoint (Method ASTM-D 1929-68) > 250 °C

Ignition temperature (Method ASTM-D 1929-68) > 400 °C

Self ignition ability not applicable

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9. Physical and chemical properties (continuation)

lower explosion limit	not determined
upper explosion limit	not determined
vapour pressure	not applicable
Density (at 20 °C)	1,16 g/cm ³
bulk density (at 20 °C)	600 to 650 Kg/m ³
solubility in water	insoluble
qualitative solubility	e.g. in esters, ketones and chlorinated
hydrocarbons	readily soluble
pH-value	not applicable

Additional information

Dust explosions are generally to be expected with dust-forming organic products.

10. Stability and reactivity

Thermal decomposition

> 250 °C

Hazardous reactions

No hazardous reactions known

Hazardous decomposition products

None when used as directed. During thermal decomposition combustible, the eyes and respiratory system irritating vapours are formed, consisting mainly of Methyl methacrylate.

11. Toxicology information

The following information is related to the component dibenzoyl peroxide.

Acute oral toxicity

There are no toxicological data available for this product.

Sensitization

Allergic reactions on humans were recorded.

Carcinogenicity

The substance shows tumor promoting properties in animal test.

Additional information on toxicology

The fine particles contained in the product may cause mechanical irritations of the skin, eyes and mucous membranes.

12. Ecology information

Additional ecological information

Do not allow to enter the soil, courses of water or sewage system.

13. Disposal instructions

Product (Components, powder and liquid)

European waste code: 07 02 99

Wastename

Not yet cured acrylic leftovers, compounds or components.

Recommendations

Must be disposed of in accordance with the regulations of the local authorities and the disposal company in a suitable and licensed facility.

Already cured acrylic leftovers

European waste code: 17 02 03

Waste name

Other cured acrylic waste

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13. Disposal instructions (continuation)

Recommendations

Can be disposed of in accordance with the regulations of the local authorities and the disposal company in a suitable and licensed facility.

Contaminated packaging

Can be burned in accordance to local regulations.

Recommendations

Dispose decontaminated packaging at local recycling facilities.

14. Transport information

No hazardous goods in the sense of general transport regulations.

15. Regulations

Labeling in accordance to 1999/45/EC:

Labeling not required.

Additional regulations for compounds according to 1999/45/EC Annex V ch. B

„Contains dibenzoyl peroxide. May cause allergic reactions“.

Hazard-determining components of labeling:

Not applicable.

Hazard symbols

None.

Risk phrases (R-phrases)

Not necessary.

Safety phrases (S-phrases)

Not necessary.

National regulations

Water pollution class

WPC: 1 (self-assessment)

16. Other information

Supplemental material

Not applicable because material is only one component of a two-component acrylic system with exactly coordinated catalyst system.

This information is based on the state of knowledge and experience pertaining on the date of issue. The information is not to be taken as a guarantee of general properties. It should neither be changed nor transferred to other products. Duplication in an unchanged state is permissible.

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2. Composition / Details of components

Chemical properties

Methyl ester of methacrylic acid or methyl methacrylate (contains activation agents).

Hazardous ingredients

Designation	Methyl methacrylate
Concentration	60 to 100%
CAS Number	80-62-6
EG-Nr.	201-297-1
INDEX-Nr.	607-035-00-6
Danger symbols	F, Xi
Risk phrases (R-phrases)	11, 36/37/38, 43

3. Possible dangers

Description of the hazards

Easily flammable.

Irritates the eyes, respiratory organs and the skin.

Possible sensitization through contact with the skin.

4. First aid

General information

Remove contaminated, soaked clothing immediately.

After inhaling

Take affected person(s) outside into the fresh air.

After contact with the skin

If product comes into contact with the skin, rinse off immediately with plenty of water and soap.

In the case of skin irritation seek medical attention.

After contact with the eyes

If product comes into contact with the eyes, immediately irrigate thoroughly under running water and seek medical attention.

After ingestion

If ingested, seek medical attention immediately.

5. Fire fighting

Suitable fire fighting agents

Water spray stream, powder-type extinguishing agents, foam, carbon dioxide.

Unsuitable fire fighting agents for safety reasons

Full water jet.

Special protective fire fighting equipment

Use self-contained respiratory equipment.

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6. Action in the event of accidental release

Personal precautionary measures

Assure appropriate air-flow. Wear protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

Environmental protection measures

Do not allow to get into drains/surface water/groundwater.

Measures for cleaning

Large quantities

Remove mechanically (hydraulic pump). Assure explosion-safe measures!

Smaller quantities

Pick up with liquid absorbing material (sand, diatomaceous earth, acid absorbent, sawdust or tissues).

7. Handling and storage

Instructions on safe handling

Keep container well closed.

Assure appropriate air-flow.

Information on fire and explosion protection

Keep away from sources of ignition - no smoking. Take precautionary measures against static discharges. In the event of fire, cool the endangered containers with water.

Requirements for storage areas and containers

Storage temperature: +10 °C to +25 °C

Short term max.: - 20 °C to +30 °C

Store in original container only. Temperatures should never exceed 25 °C. Fill container up to 90% max, because enclosed oxygen (air) is needed for stabilization purposes. Keep out of direct sunlight. Special explosion safe environment needed to store quantities larger than 5l per container.

Additional Information

If the liquid should cool down to a temperature of lower than 10°C some of the ingredients may crystallize and sink to the bottom. If the materials temperature rises up to room temperature again these crystals dissolve again. The properties of the material will not be affected by this phenomena.

8. Exposure limits and personal safety equipment

Constituents with occupational exposure limits that require monitoring

CAS No.	designation	type	value/unit	Peak limit category
80-62-6	Methyl methacrylate	OEL	210 mg/m ³	I

Remarks

Y: Danger of damage to unborn children is not to be expected as long as the LT-value does not exceed above mentioned amount.

Personal protective equipment

General protective measures

Do not inhale vapours. Avoid contact with eyes and skin.

Hygiene measures

Keep working clothes away from regular clothing. Take off contaminated clothes immediately. Follow the regular standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.

Respiratory protection

Breathing apparatus in case of high concentrations

Eye protection

Wear protective goggles.

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8. Exposure limits and personal safety equipment (continuation)

Body protection

When handling larger quantities wear face shield, apron and chemical resistant boots.

Hand protection

Wear protective gloves made of butyl rubber (0,7mm), break through time 300 min (EN 374). In practice, due to variable exposure conditions, this information can only be an aid to orientation for the selection of a suitable chemical protection glove. In particular, this information does not substitute suitability tests by the user.

General information

Gloves should be changed regularly, especially after over excessive contact with the product. A different type of glove should be considered for each workplace.

9. Physical and chemical properties

Appearance

Form: liquid

Colour: colourless

Odour: ester-like, slightly sweet, stinging

Changes in physical state (related to the component methyl methacrylate)

Melting temperature	- 48,2 ° C
Boiling temperature (at 1.013 hPa)	100,3 ° C
Flashpoint (DIN 51755)	10 ° C
Ignition temperature (DIN 51794)	430 ° C
Self ignition ability	not determined
vapour pressure (at 20 ° C)	38,7 hPa
Density (at 20 ° C)	0,94 g/cm ³
lower explosion limit	2,1 % (V)
upper explosion limit	12,5 % (V)
Relative vapor density related to air (at 20 ° C)	> 1
solubility in water (at 20 ° C)	15,9 g/l
qualitative solubility	miscible with most organic solvents
pH-value	not applicable
n-octanol/water partition coefficient	log Pow 1,38 (measured)
dynamic viscosity (at 20 ° C, Brookfield)	0,63 mPas

Further information

None.

10. Stability and reactivity

Thermal decomposition

No decomposition if stored and used correctly.

Substances to be avoided

Polymerization with heat release is possible in the presence of radical formers (e.g. peroxides), reducing substances and/or heavy metal ions.

Hazardous products of decomposition

None, if product is used correctly.

11. Toxicology information

The following information is related to the component methyl methacrylate.

Acute oral toxicity (LD50 rat, OECD 401)

> 5.000 mg/kg practically non-toxic if swallowed

Acute inhalational toxicity (LC50 rat)

29,8 mg/l low toxicity by inhalation, exposure 4h

Acute dermal toxicity (LD50)

> 5.000 mg/kg practically non-toxic in contact with skin, rabbit

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11. Toxicology information (continuation)

Irritant effect on skin

Not irritating; rabbit; exposure 24h; FDA 1959 Draize, occlusive

Irritant effect on eyes

Not irritating; rabbit; Draize

Sensitization

In sensitization tests on guinea pigs with and without adjuvant, both positive and negative results were found. In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections).

Toxicity on repeated administration: NOAEL 25ppm

At said dosis no adverse effects were observed. At higher doses adverse effects were observed; rat; inhalative 2 a, 25-400ppm (Findings: damage to mucous membranes in the nose at 400ppm)

Toxicity on repeated administration: NOAEL 2000ppm

Rat; drinking water 2 a, 6-2000ppm (Findings: no toxic effects)

Mutagenicity

Positive as well as negative results within in vitro mutagenicity / genotoxicity tests.

No experimental indication of genotoxicity in vivo available.

In summary not mutagenic according to internationally accepted criteria.

Reprotoxicity / teratogenicity

No indications of toxic effects were observed in reproduction studies in animals.

Carcinogenicity

Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.

Additional information

Avoid contact with the skin and eyes and inhalation of the product vapours.

12. Ecology information

Information on elimination (persistence and degradability)

Biodegradability

Rapidly degradable, ca. 94 % Method: OECD 301 C, 14d

Ecotoxicological effect

Fish toxicity (LC50)

> 79 mg/l Oncorhynchus mykiss, rainbow trout, OECD 203 GLP, 96h

Daphnia toxicity (EC50)

69 mg/l Daphnia magna, OECD 202, 48h

Algae toxicity (EC3)

37 mg/l Scenedesmus quadricauda, DIN 38412 section 9, 8d

Algae toxicity (EC50)

170 mg/l Selenastrum capricornutum, OECD 201, 96h

Bacteria toxicity (EC0)

100 mg/l Pseudomonas putida

Additional ecological information

Do not allow to enter soil, waterways or waste water.

13. Disposal instructions

Product (Components, powder and liquid)

European waste code: 07 02 99

Waste name

Not yet cured acrylic leftovers, compounds or components.

Recommendations

Must be disposed of in accordance with the regulations of the local authorities and the disposal company in a suitable and licensed facility.

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13. Disposal instructions (continuation)

Already cured acrylic leftovers (both components mixed and cured)

European waste code: 17 02 03

Waste name

Other cured acrylic waste

Recommendations

Can be disposed of in accordance with the regulations of the local authorities and the disposal company in a suitable and licensed facility.

Contaminated packaging

Recommendations

Can be burned in accordance to local regulations. Dispose decontaminated packaging at local recycling facilities.

14. Transport information

Overland transport

ADR/RID/GGVSE

Class: 3 flammable liquid
Dangerous cargo number: 339
UN Number: 1247
Packaging group: II
Label: 3
Declaration of the good UN 1247 Methyl methacrylate, Monomer, stabilized, 3, II

Inland waterway transport

ADNR

Class: 3 flammable liquid
UN Number: 1247
Packaging group: II
Label: 3
Declaration of the good UN 1247 Methyl methacrylate, Monomer, stabilized, 3, II

Shipment by sea

IMDG/GGVSee

Class: 3 Flammable liquid
UN Number 1247
EmS: F-E, S-D
Marine pollutant: -
Packing group: II
Proper Shipping Name: Methyl methacrylate, monomer, stabilized

Air transport

ICAO/IATA

Class: 3 Flammable liquid
UN Number 1247
Packing group: II
Proper Shipping Name: Methyl methacrylate, monomer, stabilized

DOT

UN 1247 Methyl methacrylate, monomer, stabilized

15. Regulations

Labelling in accordance to EC directive GefStoffV

Requires labelling

Hazardous component for labelling

Contains methyl methacrylate

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15. Regulations (continuation)

Hazard symbols

F Highly flammable

Xi Irritant

Risk phrases (R-phrases)

11 Highly flammable

37/38 Irritating to respiratory system and skin

43 May cause sensitization by skin contact

Safety phrases (S-phrases)

24 Avoid contact with skin

37 Wear suitable gloves

46 If swallowed, seek medical advice immediately and show container or label

National regulations (for Germany only)

Technical regulation for air 5.2.5

Water hazards class 1 (VwVwS, Annex 2)

Occupational restrictions

- Note for juveniles

- Note for pregnant women and nursing mothers

16. Other information

This product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

References

Relevant manuals and publications, toxicological and ecological studies of different manufacturers. (SIAR, OECD-SIDS, RTK public files)

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